

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A semiconductor device comprising:

a driven circuit comprising a first transistor;

a signal line electrically connected to the first transistor through a node; [[and]]

a [[first]] precharge circuit electrically connected to the signal line and comprising a second transistor; and

a current source circuit electrically connected to the first transistor and the second transistor,

wherein a gate electrode of the first transistor is connected to a drain electrode of the first transistor through a first switch,

wherein a gate electrode of the second transistor is electrically connected to a drain electrode of the second transistor,

wherein a gate width of the second transistor is larger than a gate width of the first transistor, and

wherein the [[first]] precharge circuit is configured to perform a precharge of the driven circuit prior to supplying a signal current to the driven circuit.

2-6. (Cancelled)

7. (Previously Presented) The semiconductor device according to claim 1, further comprising an impedance transformation amplifier.

8-17. (Cancelled)

18. (Previously Presented) A semiconductor device comprising:
a driven circuit comprising a first transistor;
a precharge circuit comprising a second transistor;
a first switch for controlling an electrical connection between the driven circuit and the precharge circuit; and
a second switch for controlling an electrical connection between the driven circuit and a current source circuit,
wherein a gate electrode of the first transistor is connected to a drain electrode of the first transistor through a third switch,
wherein a gate electrode of the second transistor is electrically connected to a drain electrode of the second transistor, and
wherein a gate width of the second transistor is larger than a gate width of the first transistor.

19-27. (Cancelled)

28. (Previously Presented) The semiconductor device according to claim 18 , wherein a gate and a drain of the second transistor are connected to each other.

29-58. (Cancelled)

59. (Previously Presented) The semiconductor device according to claim 18, further comprising an amplifier circuit configured to amplify a signal current outputted from the precharge circuit.

60-63. (Cancelled)

64. (Previously Presented) The semiconductor device according to claim 7, wherein the impedance transformation amplifier is a source follower circuit.

65. (Cancelled)

66. (Previously Presented) The semiconductor device according to claim 59, wherein the amplifier circuit is a source follower circuit.

67-70. (Cancelled)

71. (Currently Amended) The semiconductor device according to claim 1, wherein [[a]] the gate electrode of the second transistor is connected to the drain electrode of the second transistor.

72. (Previously Presented) The semiconductor device according to claim 1, wherein the precharge is performed by supplying a precharge voltage to the node.

73. (Previously Presented) The semiconductor device according to claim 1, wherein the precharge circuit is included in a current drive circuit.

74. (Previously Presented) The semiconductor device according to claim 18, wherein the precharge circuit is included in a current drive circuit.

75. (Cancelled)

76. (Currently Amended) A semiconductor device comprising:
a driven circuit comprising a first transistor;
a signal line electrically connected to the first transistor through a node;
a [[first]] precharge circuit electrically connected to the signal line and comprising a second transistor; ; and

a current source circuit electrically connected to the first transistor and the second transistor,

wherein a gate electrode of the first transistor is connected to a drain electrode of the first transistor through a first switch,

wherein a gate electrode of the second transistor is electrically connected to a drain electrode of the second transistor,

wherein a gate length of the second transistor is smaller than a gate length of the first transistor, and

wherein the [[first]] precharge circuit is configured to perform a precharge of the driven circuit prior to supplying a signal current to the driven circuit.

77. (Previously Presented) The semiconductor device according to claim 76, further comprising an impedance transformation amplifier.

78. (Currently Amended) The semiconductor device according to claim 76, wherein [[a]] the gate electrode of the second transistor is connected to the drain electrode of the second transistor.

79. (Previously Presented) The semiconductor device according to claim 77, wherein the impedance transformation amplifier is a source follower circuit.

80. (Previously Presented) The semiconductor device according to claim 76, wherein the precharge is performed by supplying a precharge voltage to the node.

81. (Previously Presented) The semiconductor device according to claim 76, wherein the precharge circuit is included in a current drive circuit.

82. (Previously Presented) A semiconductor device comprising:
a driven circuit comprising a first transistor;

a precharge circuit comprising a second transistor;
a first switch for controlling an electrical connection between the driven circuit and the precharge circuit; and
a second switch for controlling an electrical connection between the driven circuit and a current source circuit,
wherein a gate electrode of the first transistor is connected to a drain electrode of the first transistor through a third switch,
wherein a gate electrode of the second transistor is electrically connected to a drain electrode of the second transistor, and
wherein a gate length of the second transistor is smaller than a gate length of the first transistor.

83. (Previously Presented) The semiconductor device according to claim 82, further comprising a current source circuit configured to input a signal current to the driven circuit.

84. (Previously Presented) The semiconductor device according to claim 82, further comprising an amplifier circuit configured to amplify a signal current outputted from the precharge circuit.

85. (Currently Amended) The semiconductor device according to claim 82, wherein the gate electrode and the drain electrode of the second transistor are connected to each other.

86. (Previously Presented) The semiconductor device according to claim 84, wherein the amplifier circuit is a source follower circuit.

87. (Previously Presented) The semiconductor device according to claim 82, wherein the precharge circuit is included in a current drive circuit.

88. (New) The semiconductor device according to claim 18,
wherein a first terminal of the first switch is electrically connected to the precharge circuit, and
wherein a second terminal of the first switch is electrically connected to the second switch.

89. (New) The semiconductor device according to claim 82,
wherein a first terminal of the first switch is electrically connected to the precharge circuit, and
wherein a second terminal of the first switch is electrically connected to the second switch.

90. (New) The semiconductor device according to claim 1, further comprising:
a second switch configured to control an electrical connection between the signal line and the precharge circuit;
a third switch configured to control an electrical connection between the signal line and the current source circuit; and
a fourth switch configured to control an electrical connection between the current source circuit and the precharge circuit.

91. (New) The semiconductor device according to claim 18, further comprising a fourth switch configured to control an electrical connection between the current source circuit and the precharge circuit.

92. (New) The semiconductor device according to claim 76, further comprising:
a second switch configured to control an electrical connection between the signal line and the precharge circuit;

a third switch configured to control an electrical connection between the signal line and the current source circuit; and

a fourth switch configured to control an electrical connection between the current source circuit and the precharge circuit.

93. (New) The semiconductor device according to claim 82, further comprising a fourth switch configured to control an electrical connection between the current source circuit and the precharge circuit.